

## **REMARKS**

The Office Action of September 23, 1998 has been fully considered by the Applicant. In view of the following comments, reconsideration of the application is respectfully requested.

### **The Office Action**

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit (U.S. Patent No. 5,314,187).

Separately, Claims 1-6 stand provisionally rejected under the judicially created doctrine of double patenting over claims 1-8 of copending application No. 08/920,070. Similarly, Claims 1-8 stand provisionally rejected under the judicially created doctrine of double patenting over claims 1-6 of copending application No. 08/870,585.

### **Rejection Under 35 U.S.C. § 103**

Claims 1-8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the '187 patent to Proudfit. Specifically, the Examiner states in the Office Action at page 2:

"Proudfit discloses the claimed invention with the exception of the particular hardness/specific gravity claimed. However, Proudfit discloses a hard inner cover and softer outer cover formed from materials such as those disclosed by the applicant. Obviously the exact hardness of the layers would have been up to the ordinarily skilled artisan depending on distance and feel considerations. Absent a showing of unexpected results, the particular parameters of Proudfit's ball, which is formed from the same materials in the same fashion claimed by applicant, would have been obvious to one of ordinary skill in the art."

Applicants are of the opinion that the Examiner has not addressed or has misinterpreted material limitations present in the claims. Specifically, with respect to the parameters present in the claims concerning specific gravity, thickness, and hardness, the Examiner has failed to provide a teaching of those particular parameters in combination for a golf ball. This is discussed in more

detail below.

### **The Present Invention and the Higuchi '852 Patent**

The invention of this application (claims 1-8) is directed to improved multi-layer golf ball cover compositions and the resulting multi-layer golf balls produced thereby. More specifically, claims 1-8 of the present application cover the same patentable invention as claims 1-8 of Higuchi et al. (U.S. Patent No. 5,553,852), wherein Applicant has proposed declaring an interference between the present application and Higuchi et al. '852. (See Request for Interference filed September 5, 1997.)

As noted in column 2, lines 3-40 of Higuchi et al. '852 patent, it has been found that by providing a relatively hard intermediate layer between a solid center core and the outer cover, and by controlling the size, specific gravity, and/or softness of the core, intermediate layer and outer cover layer, the center core and outer cover can be made relatively soft to improve feeling and controllability without deteriorating flying performance and durability. In this regard, Higuchi et al. '852 patent indicates:

Briefly stated, an intermediate layer having a thickness of at least 1 mm, a specific gravity of less than 1.2, and a hardness of at least 85 on JIS C scale is formed around a center core having a diameter of at least 29 mm and a specific gravity of less than 1.4 and greater than the intermediate layer specific gravity. A cover having a thickness of 1 to 3 mm is formed on the outer surface of the intermediate layer to complete a solid golf ball. Then even when the center core is softened to a JIS C scale hardness of 45 to 80 and the cover softened to a JIS C scale hardness of 50 to 85, the feeling and controllability can be improved at no sacrifice of flying distance and durability. Further when the intermediate layer is formed of a resin composition based on a high repulsion ionomer resin, the hitting feel and controllability can be further improved with no sacrifice of flying distance and durability.

The present invention provides a three-piece solid golf ball comprising a center core, an intermediate layer, and a cover wherein the center core has a diameter of at

least 29 mm and a specific gravity of less than 1.4, the intermediate layer has a thickness of at least 1 mm, a specific gravity of less than 1.2, and a hardness of at least 85 on JIS C scale. The cover has a thickness of 1 to 3 mm. The specific gravity of the intermediate layer is lower than the specific gravity of the center core. In one preferred embodiment, the intermediate layer is formed of a composition based on a high repulsion ionomer resin.

In addition, it has been found that golf balls having the particular construction as set forth in the present application and in the claims possess softer compression and higher spin rates than conventional golf balls. Furthermore, it has been discovered that use of a softer solid core and/or outer cover layer adds to the desirable "feel" and high spin rate while maintaining respectable resiliency.

Consequently, the overall combination of a core, intermediate or inner cover layer, and an outer cover layer having a certain size or thickness, specific gravity and softness results in a standard size or oversized golf ball having *enhanced resiliency* (improved travel distance) and *durability* (i.e. cut resistance, etc.) characteristics while maintaining, and in many instances improving, the balls playability properties.

### **The Prior Art**

The '187 patent to Proudfit teaches a two layer cover for a golf ball. The two layer cover comprises an inner layer which is molded over a core and an outer layer which is molded over the inner layer. No particular size, specific gravity, softness, etc. of the core is specified. As a matter of fact, the core may be either a solid or wound core of any specific gravity, softness, etc.

The inner cover layer is formed from a relatively hard, cut-resistant material such as ionomer resin, and the outer layer is formed from a relatively soft rubber material such as natural balata (a type of polyisoprene), synthetic balata, natural rubber, polybutadiene, and polyoctenylene rubber. Preferably, the outer layer is a blend of balata and thermally cross linkable elastomer such as polybutadiene.

With respect to the inner cover layer, no specific thickness, specific

gravity and hardness is specified. As the Examiner knows, the hardness of various ionomer resins can vary greatly from "hard" to "soft". See for example, U.S. Patent No. 4,884,814. Moreover, no information is provided in Proudfit concerning the relationship of the specific gravity of the intermediate layers and the core (whether solid or wound). Similar analysis can also be said with respect to the relationship of the specific gravity of the outer cover layer, the intermediate layer and the core (whether solid or wound).

**The Claimed Invention Distinguishes Patentability  
and Unobviously Over the Cited Art**

A close reading of claims 1-8 of the involved application reveals that each of these claims recites elements and aspects of the present invention's golf balls that are not taught or described in the '187 patent to Proudfit.

The present invention, as claimed, requires an outer cover which is comprised of a relatively soft (compared to the inner cover) polymeric material. The outer cover layer has a thickness of 1-3 mm. The intermediate layer of the golf balls of the present application has a specific gravity of less than 1.2, is at least 1 mm thick and has a hardness of at least 85 on the JIS-C scale. In addition, the specific gravity of the intermediate layer is lower than the specific gravity of the core. The core of the golf ball of the present application has a diameter of at least 29 mm and a specific gravity of less than 1.4

Applicant respectfully submits that Proudfit fails to teach or suggest the claim designated components or layers of the golf balls of the present invention. This includes the failure of the '187 Proudfit patent to disclose the specific gravities, hardnesses, etc. of the respective components or layers of Applicant's golf balls.

Furthermore, Proudfit fails to describe or even suggest the particular combination of these features by themselves, and the combination of these features with other aspects of the claimed golf ball. Simply put, the '187 patent to Proudfit does not provide the necessary motivation and requisite teaching to arrive at the subject matter recited in claims 1-8.

Specifically, Proudfit, while disclosing a two layer cover comprising

a relatively hard inner cover and relatively softer outer cover, fails to recognize the criticality of the claim designated hardness, specific gravity, and thickness of each of the layers in the presently claimed golf balls.

The present invention, utilizes the claim designated multi-layer cover which has a relatively hard intermediate layer ( $\text{JIS-C} \geq 85$ ) and which has a specific gravity of less than 1.2 and which is also lower than the specific gravity of the core; and a relatively softer outer cover layer (compared to the intermediate layer). This multi-layer cover, in combination with the core which has a specific gravity of less than 1.4, provides a golf ball which has improved feel and controllability while maintaining superior flying performance.

In summary, the present application's claims recite a multi-layer golf ball wherein the specifically claimed parameters are neither taught nor suggested by Proudfit. It is the combination of the specifically claimed hardness, specific gravity and thickness of each component or layers of the presently claimed golf balls which gives the golf ball improved feel and control. As this combination of parameters relating to hardness, specific gravity and thickness of the layers is not taught or suggested by Proudfit, Applicant's submit that the present claims are patentable thereover.

Consequently, the Applicant respectfully submits that the golf balls according to the claimed invention are not obvious variants of the Proudfit balls as Proudfit does not recognize or provide motivation for the unexpected enhanced durability of the claimed balls while retaining desirable properties relating to feel, control and distance.

#### **Provisional Double Patenting Rejections**

Claims 1-6 have been provisionally rejected over claims 1-8 of copending U.S. Application No. 08/920,070. Additionally, claims 1-8 have been provisionally rejected over claims 1-6 of copending U.S. Application No. 08/870,585.

Applicants are of the opinion that the instant application's claims are not exactly the same as the claims of each of 08/920,070 and 08/870,585. However, upon indication of allowable subject matter, applicants will provide a

Terminal Disclaimer, if required and appropriate, to overcome the double patenting rejections.

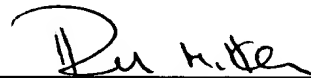
At this time applicant believes no Terminal Disclaimer is necessary as no allowable subject matter has been indicated in this or the copending applications.

**Conclusion**

In view of the above comments, it is believed that this application is in condition for allowance. Therefore, the Applicant respectfully requests favorable reconsideration and the initiation of Interference proceedings with the Higuchi '852 patent. Should any issues remain, the Examiner is encouraged to contact the undersigned to attempt to resolve any such issues.

Respectfully submitted,

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